

NOT FOR PUBLICATION

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEW JERSEY

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LONZA, INC,

Plaintiff,

v.

NALCO COMPANY,

Defendant.

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CIVIL ACTION NO. 09-4635

OPINION

LINARES, District Judge.

This matter is before the Court by way of an application for claims construction by Plaintiff Lonza, Inc. (“Plaintiff” or “Lonza”) and Defendant Nalco Co. (“Defendant” or “Nalco”) (Docket Entry Nos. 36, 42, 43, 44, 47, and 48.) United States Patent No. RE39,021 (the “’021 Patent”) is directed to an invention increasing biological control in papermaking pulp slurries by adding a certain combination of chemicals to the slurry. The parties seek the Court’s interpretation of certain language contained in the Claim 14 of the ‘021 Patent, namely: (1) “process for making paper”; (2) “sizing”; and (3) “a mixture consisting essentially of the slimicide and N-hydrogen compound.”

The Court held a Markman hearing on April 21, 2011, and has considered the parties’ written and oral arguments. The Court sets forth herein its construction of the disputed claim terms.

## II. FACTUAL BACKGROUND

The sole claim at issue is Claim 14 of the ‘021 Patent which is set forth below with the disputed terms identified in bold italics:

In a *process for making paper* from pulp fiber wherein from 0.2 to 3 weight percent of organic matter comprising from 95 to 99 weight percent pulp fiber is maintained in a circulating water slurry in the presence of *sizing*, the improvement of

performing said process in the presence of a slimicidally effective amount of an N-hydrogen compound and a slimicide in a molar ratio of from 0.1:1 to 10:1 in said circulating water slurry; wherein said N-hydrogen compound is p-toluenesulfonamide, dimethylhydantoin, methylethylhydantoin, cyanuric acid, succinimide, urea, 4,4-dimethyl-2-oxazolidinone, or glycouril and said slimicide is chlorine gas, bromine, bromine chloride, an alkali metal or alkaline earth metal hypohalite, a halogenated hydantoin, a halogenated cyanurate, or halogenated cyanuric acid and the amount of the N-hydrogen compound present in said circulating water slurry is sufficient to enhance the biocidal efficacy of the slimicide and reduce absorbable organic halogen (AOX) by-product formation, wherein the N-hydrogen compound is directly added to the slurry before or after the addition of the slimicide or with the slimicide in *a mixture consisting essentially of the slimicide and the N-hydrogen compound*.

The '021 Patent is a reissue of U.S. Patent No. 5,565,109 ("109 Patent"). A reexamination request was filed for the '109 Patent on July 22, 1997 and a certificate issued November 23, 1999. The claim at issue – claim 14 of the '021 Patent (see above) – was added during the '109 Reexamination and amended during the prosecution of the '021 Patent.

### III. LEGAL STANDARD

A court's analysis of a patent infringement claim is two-fold. Tate Access Floors, Inc. v. Interface Architectural Resources, Inc., 279 F.3d 1357, 1365 (Fed. Cir. 2002). The court must first define the meaning and scope of the patent claims as a matter of law. Markman v. Westview Instruments, Inc., 52 F.3d 967, 978 (Fed. Cir.1995) (en banc), aff'd, 517 U.S. 370 (1996). The court then engages in a comparison of the claims as construed to the alleged infringing product (or method). Tate, 279 F.3d at 1365. At this stage, the Court must only engage in the first step.

Claim construction is a matter of law to be determined solely by the court. Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir.2005), cert. denied, 546 U.S. 1170 (2006). "It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." Id. at 1312 (quotations omitted). In construing the terms of a patent, a court should look first to the language of the claim itself. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). The terms in the claim "are generally given their ordinary and customary meaning."<sup>1</sup> Id. at 1582. "[T]he ordinary and customary

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<sup>1</sup>There are two situations in which it must enter a definition different from the ordinary and customary

meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.” Phillips, 415 F.3d at 1313. A court “must look at the ordinary meaning in the context of the written description and the prosecution history.” Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1319 (Fed. Cir. 2005). The court should turn to “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.” Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed. Cir. 2004).

To this end, the court should first examine the intrinsic record – the patent itself, including the claims, the specification, and the prosecution history. Vitronics, 90 F.3d at 1582 (citing Markman, 52 F.3d at 979). The specification “acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.” Id. Indeed, the Federal Circuit explains that the specification is “usually . . . dispositive . . . [and] the single best guide the meaning of a disputed term.” Phillips, 415 F.3d at 1315 (quoting Vitronics, 90 F.3d at 1582). It is “entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.” Id. at 1317. The specification is also an important guide in claims construction as it may contain “an intentional disclaimer, or disavowal, of claim scope by the inventor.” Id. at 1316.

Additionally, the court should consult the patent’s prosecution history as it “provides evidence of how the PTO and the inventor understood the patent.” Id. The prosecution history is the complete record of the proceedings before the PTO and includes the prior art cited by the patentee during examination of the patent. Id. at 1317. Moreover, the prosecution history “can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” Id. Indeed, the Federal Circuit has repeatedly

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meaning: (1) where the “patentee has chosen to be his or her own lexicographer by clearly setting forth an explicit definition for a claim term,” Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 990 (Fed. Cir. 1999) (citing In re Paulsen, 30 F.3d 1475, 1480 (Fed. Cir. 1994)), and (2) where “the term or terms chosen by the patentee so deprive the claim of clarity that there is no means by which the scope of the claim may be ascertained from the language used,” *id.* (citing Eastman Kodak Co. v. Goodyear Tire & Rubber Co., 114 F.3d 1547, 1554 (Fed. Cir. 1997)).

emphasized the need to consult the prosecution history to “exclude any interpretation that was disclaimed during prosecution.” Chimi v. PPG Indus., 402 F.3d 1371, 1384 (Fed. Cir. 2005).

A district court may also examine extrinsic evidence – “all evidence external to the patent and prosecution history.” Markman, 52 F.3d at 980; Phillips, 415 F.3d at 1317-18 (stating that the Federal Circuit “ha[s] authorized district courts to rely on extrinsic evidence”). Such evidence consists of testimony by the inventor or by experts, dictionaries, and treatises. Markman, 52 F.3d at 980. In particular, a court may find reference to technical dictionaries useful “in determining the meaning of particular terminology.” See Phillips, 415 F.3d at 1318. However, extrinsic evidence is generally thought less reliable than the patent and prosecution history, id. at 1318-19; in essence, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language,” C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir.2004) (quotation omitted).

#### IV. LEGAL DISCUSSION

The parties dispute the following three terms contained in Claim 14 of the ‘021 Patent: (1) “process for making paper”; (2) “sizing”; and (3) “a mixture consisting essentially of the slimicide and the N-hydrogen compound.”

##### a. Disputed Claims One & Two

With respect to disputed terms one<sup>2</sup> and two<sup>3</sup>, Nalco agrees that this Court may accept its proposed construction only if Lonza disclaimed an alkaline papermaking processes during the prosecution history.<sup>4</sup> As such, the Court will begin its analysis with the doctrine of prosecution disclaimer which “preclude[s] patentees from recapturing through claim interpretation a specific meaning disclaimed during prosecution.” Omega Eng’g Inc. v. Raytek Corp., 334 F.3d 1314, 1324-26 (Fed. Cir. 2003). The doctrine “attaches only where an application by amendment or by

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<sup>2</sup> Term One: Lonza proposes “a process for making paper from pulp” whereas Nalco proposes an “acidic process for making paper.”

<sup>3</sup>Term Two: Lonza proposes “a sizing agent used to impart resistance to liquid penetration of the finished sheet of paper” whereas Nalco proposes “sizing rosin” – which is a specific form of sizing.

<sup>4</sup> “COURT: We are really talking about a disclaimer argument, whether or not I agree with you on that issue and if I don’t, then I can’t really impute acidic into the first disputed term or into the second one for that matter. COUNSEL FOR NALCO: That is correct.” (Tr. 61: 2-8).

argument has ‘unequivocally disavowed a certain meaning to obtain his patent.’” Schindler Elevator Corp. v. Otis Elevator Co., 593 F.3d 1275, 1285 (Fed. Cir. 2010) (citing Omega Engineering, Inc. v. Raytek Corp., 334 F.3d 1314, 1324 (Fed. Cir. 2003)). Moreover, “any argument made to the Examiner constitutes a disclaimer only if it is ‘clear and unmistakable.’” Id. (citing Perdue Pharma L.P. v. Endo Pharms., Inc., 438 F.3d 1123, 1136 (Fed. Cir. 2006)).

Here, a brief synopsis of the ‘021 Patent prosecution is in order. The ‘021 Patent is a reissue of U.S. Patent No. 5,565,109 (“the ‘109 Patent”), which was filed on October 14, 1994 and issued on October 15, 1996. A reexamination request was filed for the ‘109 Patent on July 22, 1997 based on references which were not considered by the Patent Office during the prosecution of the application.<sup>5</sup> Reexamination was granted and, ultimately, the Examiner allowed Lonza’s amended claims and a Reexamination Certificate was issued on November 23, 1999.

Nalco now argues that “Lonza’s arguments distinguishing alkaline paper making processes from its alleged invention were necessary for patentability and evidence a clear and unmistakable disclaimer of such subject matter.” (D.E. 48, Nalco Br. 3). In support of this contention, Nalco relies on (1) a portion of Lonza’s October 6, 2007 response to the Examiner distinguishing the Japanese Patent (“October 6 Statement”), (2) the declaration of the inventor Philip Sweeny (“Sweeny Declaration”), and (3) Lonza’s arguments distinguishing the Matson Article (“Matson reference”). The Court will address each alleged instance of disclaimer in turn, but from the beginning it bears noting that neither of the prior art references (Japanese Patent & Matson reference) are directed toward an alkaline paper making process.

**October 6 Statement:** On reexamination, the Japanese Patent was cited by the Examiner as both anticipatory under 35 U.S.C. Section 102(b) and as rendering the invention obvious under 30 U.S.C. Section 103. In order to distinguish the ‘021 Patent over the prior art Japanese Patent, Lonza argued, *inter alia*, that:

[S]tandard acid making paper applications, as specified by ASTM E 600-91 use a pH range of 5.0-5.5. All of the examples of the subject specification employ this pH range. In contrast, the examples of [the Japanese Patent] use a pH of 5.5-8.5,

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<sup>5</sup> The new references at issue were as follows: (1) Japanese Patent Application No. JP 31492 (“the Japanese Patent”); (2) United Kingdom Patent Number 1,358,616 (“U.K. ‘616”); (3) the DANTOBROM® Product Labels; and (4) Matson, et. Al., “Biofouling Control in Recycled Cooling Water with Bromo Chloro Dimethylhydantoin,” Cooling Tower Institute 1982 Annual Meeting, Feb. 1, 1982 (“Matson Article”).

which is beyond the papermaking pH range. Therefore, one of ordinary skill in the art of papermaking would not have a reasonable expectation of successfully using the hydantoins of [the Japanese Patent] in papermaking applications as [the Japanese Patent] discloses that the compounds are operative within a pH range beyond that used for papermaking.

(See D.E. 44, JXD at LONZA 00264). Nalco contends that this statement is a clear and unambiguous disavowal of alkaline papermaking processes because Lonza argued to the Examiner that the '021 Patent is different than the prior art – here, the Japanese Patent – because it is limited to a pH range that does not exceed 5.5, i.e., an acidic process. In other words, Nalco argues that if the '021 Patent does not employ an alkaline pH range, then it must be cabined to an acidic pH range.

The Court's review of the relevant prosecution history reveals that the distinction that was made at reexamination was not simply that the '021 Patent is distinguishable from the Japanese Patent based on pH, but rather that the '021 Patent and the Japanese Patent are directed toward different processes (papermaking and pulpmaking, respectively) and that the different pH range utilized in either process is evidence that their respective teachings are distinguishable processes. In other words, Lonza argued that because the Japanese Patent is directed toward pulpmaking, then "[a] person of ordinary skill in the art would not have a reasonable expectation of successfully using [the teachings] of [the Japanese Patent] in papermaking applications." (See JX D at Lonza 00264). The Court finds that Lonza's reference to pH in the October 6 Statement can be fairly read to distinguish the '021 Patent from the Japanese patent as related to a non-papermaking process. To that end, a statement that a process unrelated to papermaking – here, pulpmaking – falls outside of the accepted papermaking pH range does not clearly and unmistakably translate into a declaration that the '021 Patent does not contemplate an alkaline paper making process. Lonza's explanation does not distinguish the prior art based on an assertion that the '021 Patent functions exclusively in an acidic pH range, but rather distinguishes the prior art based on the fact that it functions outside of an acidic pH range. Therefore, it is reasonable to read Lonza's statements during prosecution as permitting, but not mandating, the use of an acidic pH range. Thus, Nalco has not met its heavy burden to show an unequivocal disavowal, and the Court rejects its construction to the extent that it relies upon a purported disavowal in the prosecution history. See Lucent Tech., Inc. v. Gateway, Inc., 525 F.3d 1200, 1211 (Fed. Cir. 2008) (refuting clear

disavowal where the “prosecution clearly distinguish[ed] the claim [ ]” from prior art, but nevertheless did “not constrain” the claim on that distinction); See also Gemstar–TV Guide Int’l, Inc. v. Int’l Trade Com’n, 383 F.3d 1352, 1375 (Fed. Cir. 2004) (rejecting theory of claim disavowal or disclaimer where “[patentee] stated only that the ... reference was incapable of performing a certain type of search, not that the scope of the claimed invention was limited to that particular type of search.”).

Although Nalco’s argument is well taken, under the particular facts of this case and given the strict standard of prosecution disclaimer the October 6 Statement does not signal a clear and unmistakable disclaimer of an alkaline papermaking process and, therefore, prosecution disclaimer does not attach.

**Sweeny Declaration:** Nalco also points to the Declaration of Philip Sweeny as evidence of Lonza’s clear and unambiguous disclaimer of alkaline papermaking processes. Specifically, Mr. Sweeny stated that “[t]he method disclosed in the ‘492 patent [the Japanese Patent] does not contemplate papermaking applications as demonstrated by the range of pH considered: pH 5.5-8.0.” (See Dckt. 44-5, JX D at LONZA 00214). Nalco argues that this is a disavowal of alkaline papermaking processes because Lonza argued to the Examiner that the ’021 Patent is distinguishable over the prior art because the prior art contemplates only an alkaline pH range. Here, again, the Court disagrees with Nalco for the same reasons set-forth with respect to the October 6 Statement. After a thorough review of the prosecution history, it is clear that in order to distinguish the ’021 Patent over the Japanese Patent Lonza sought to demonstrate that the patents were directed toward different processes and that “[a] person of ordinary skill in the art would not have a reasonable expectation of successfully using [the teachings] of [the Japanese Patent] in papermaking applications.” (See JX D at Lonza 00264). In support of this argument, Lonza offered the testimony of Mr. Sweeny that the Japanese Patent considers an alkaline pH range. The Sweeny Declaration does not clearly and unmistakably articulate that the ’021 Patent is confined to acidic papermaking processes, but rather states that the Japanese Patent is not directed toward an acidic papermaking process. See Lucent Tech., Inc., 525 F.3d at 1211 (Fed. Cir. 2008) (refuting clear disavowal where the “prosecution clearly distinguish[ed] the claim [ ]” from prior art, but nevertheless did “not constrain” the claim on that distinction); See also Gemstar–TV Guide Int’l, Inc., 383 F.3d at 1375 (Fed. Cir. 2004) (rejecting theory of claim disavowal or disclaimer where



“[patentee] stated only that the ... reference was incapable of performing a certain type of search, not that the scope of the claimed invention was limited to that particular type of search.”). As such, the doctrine of prosecution disclaimer cannot attach to the Sweeny Declaration.

**Matson reference:** The Matson reference discloses a process to control biofouling in high pH cooling water. It does not disclose a process for either acidic papermaking or alkaline papermaking. That said, Nalco contends that Lonza’s arguments distinguishing the Matson reference evidence a clear and unambiguous disavowal of alkaline papermaking processes. Specifically, Nalco points to Lonza’s statement that “papermaking applications employ a pH range of 5.0-5.5, and the utility of a compound beyond this specific range, in the absence of high concentrations of organic matter does not suggest the utility of the claimed compounds in papermaking.” (See JXD at LONZA00269). Here, again, a statement that a process unrelated to papermaking falls outside of the accepted papermaking pH range does not clearly and unmistakably translate into a declaration that the ‘021 Patent does not contemplate an alkaline paper making process. The Court finds that in the context of the prosecution history this statement does not rise to the level of a clear and unmistakable disclaimer of an alkaline paper making process.

Having thoroughly reviewed the prosecution history of the ‘021 Patent, the Court finds that Lonza did not unequivocally disclaim alkaline papermaking because although Lonza consistently argued that the prior art references operated in an alkaline range, Lonza did not distinguish the prior art based on an assertion that the ‘021 Patent functions exclusively in an acidic pH range. Accordingly, since the parties agree that the terms’ ordinary meanings are not contradicted by the specification and because the Court finds no clear and unmistakable disclaimer of alkaline papermaking in the file history, Lonza’s proposed constructions of disputed terms one and two are, therefore, adopted.<sup>6</sup>

#### **b. Disputed Claim Three**

The Court now turns to the third disputed term: “a mixture consisting essentially of the slimicide and N-hydrogen compound.” Lonza proposes “a mixture including a slimicide and an N-hydrogen compound and any other ingredients that do not materially affect the basic and novel

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<sup>6</sup> Because the Court adopts Lonza’s interpretation, it need not address Lonza’s argument that Nalco’s proposed construction violates the principle of claim differentiation.



properties of the invention” whereas Nalco proposes “a mixture that includes an N-hydrogen compound and that excludes any unspecified materials that materially affect the basic and novel characteristics of the mixture.” Here, the Court’s construction turns on whether the term at issue – “consisting essentially of” – modifies and applies to the term mixture *or* to the entirety of claim 14.

Both parties contend that the Federal Circuit’s decision in PPG Industries v. Guardian Industries Corp. supports their respective arguments. There, the Federal Circuit explained that:

[t]ypically, ‘consisting essentially of’ precedes a list of ingredients in a composition claim or a series of steps in a process claim. By using the term ‘consisting essentially of,’ the drafter signals that the invention necessarily includes the listed ingredients and is open to unlisted ingredients that do not materially affect the basic and novel properties of the invention.

See 156 F.3d 1351, 1354 (Fed. Cir. 1998).

Based on this language, Lonza contends that Federal Circuit precedent commands that the phrase ‘consisting essentially of’ must always be applied to the entirety of the claimed invention. With this in mind, Lonza argues that there can be no dispute as to the inventive properties associated with the claimed process for making paper – specifically, that “Claim 14 defines a process for making paper from pulp fiber where ‘the amount of N-hydrogen compound present in said circulating water slurry is sufficient to enhance the biocidal efficacy of the slimicide and reduce absorbable organic halogen (AOX) by-product formation.’”

The Court disagrees. In PPG Industries v. Guardian Industries Corp. the term “consisting essentially of,” when read in the context of the claim at issue, is used at the beginning of the claim and, therefore, serves as the transition phrase for the entire claim. Here, the term “consisting essentially of” is not used as a transition phrase at the beginning of the claim, but rather at the end of the body of the claim. Logically, given its placement within the claim, “consisting essentially of” modifies only the last clause and, therefore, its construction must be limited to that clause. Stated differently, “consisting essentially of” appears in the body of the claim and directly before an element of the claimed invention – namely, the mixture – thus modifying only that element of the claim, not the entire claim. As such, the Court adopts Nalco’s proposed construction.

## V. CONCLUSION

For the aforementioned reasons, the Court construes the disputed terms of the '021 Patent as detailed above. An appropriate Order accompanies this Opinion.

Dated: August 4, 2011

/s/ Jose L. Linares  
United States District Judge